

WHAT IS CLAIMED IS:

1. A system for sending high fidelity sound between wireless units, comprising:

5 an audio interface operable to receive audible sounds and generate signals that represent the audible sounds;

a coding module operable to encode a first portion of the signals and a second portion of the signals from the audio interface, wherein the audible sounds represented by the first portion and the second portion are encoded at a rate greater
10 than eight kilohertz; and

a wireless module operable to transmit the first encoded portion over a first synchronous channel and the second encoded portion over a second synchronous channel.

15 2. The system of Claim 1, wherein the audio interface comprises:

a first input device operable to receive audible sounds and generate analog signals that represent the audible sounds;

a second input device operable to receive audible sounds and generate analog signals that represent the audible sounds; and

20 a delay device operable to delay the analog signals from the second input device.

3. The system of Claim 2, wherein the first input device is a microphone.

25 4. The system of Claim 1, wherein the coding module comprises:

a first encoder operable to encode portions of the signals at a certain rate; and

a second encoder operable to encode portions of the signals at a certain rate, the analog signals encoded by the second encoder being out of phase with the signals encoded by the first encoder.

30

5. The system of Claim 4, wherein the signals encoded by the second encoder are one-hundred and eighty degrees out of phase with the signals encoded by the first encoder.

5 6. The system of Claim 1, wherein the coding module encodes the signals according to G.711.

7. The system of Claim 1, further comprising a controller operable to determine whether high fidelity sound should be transmitted and instruct the wireless module to establish the synchronous channels if high fidelity sound should be transmitted.

8. The system of Claim 1, wherein the first synchronous channel and the second synchronous channel comprise synchronous connection-oriented links.

9. The system of Claim 1, wherein:
the wireless module is further operable to receive a first encoded portion and a second encoded portion representing audible sounds, the second portion being out of phase with the first portion; and

20 the coding module is further operable to decode the first encoded portion and the second encoded portion.

10. The system of Claim 9, wherein the coding module is further operable to generate analog signals that represent the audible sounds and send the analog signals from the first portion over a first link and the analog signals from the second portion over a second link, and further comprising:

a delay device coupled to the first link and operable to delay the analog signals on the first link so that they are in phase with the analog signals on the second link; and

30 an audio output device coupled to the first link and the second link and operable to generate audible sounds based on the analog signals on the first and second links.

11. A method for sending high fidelity sound between wireless units, comprising:

receiving audible sounds at a wireless unit;
generating signals that represent the audible sounds;
5 encoding a first portion of the signals;
encoding a second portion of the signals;
transmitting the first encoded portion over a first synchronous channel; and
transmitting the second encoded portion over a second synchronous channel;
wherein the audible sounds represented by the first portion and the second
10 portion are encoded at a rate greater than eight kilohertz.

12. The method of Claim 11, wherein generating signals comprises:
generating two sets of analog signals that represent the audible sounds; and
delaying the second set of analog signals so that it is out of phase with the first
15 set of analog signals.

13. The method of Claim 12, wherein the delay results in the second set of
analog signals being one-hundred and eighty degrees out of phase with the first set of
analog signals.

14. The method of Claim 11, wherein:
encoding a first portion of the signals comprises encoding portions of the
signals at a certain rate; and
encoding a second portion of the signals comprises encoding portions of the
25 signals at the rate.

15. The method of Claim 11, wherein the analog signals are encoded
according to G.711.

16. The method of Claim 11, further comprising:
determining whether high fidelity sound should be transmitted; and
establishing the synchronous channels if high fidelity sound should be
transmitted.

5

17. The method of Claim 16, wherein determining whether high fidelity
sound should be transmitted comprises receiving a message indicating that high
fidelity sound is desired.

10

18. The method of Claim 11, wherein the first synchronous channel and
the second synchronous channel comprise synchronous connection-oriented links.

15

19. The method of Claim 11, further comprising:
receiving a first encoded portion and a second encoded portion representing
audible sounds, the second portion being out of phase with the first portion;
decoding the first encoded portion and the second encoded portion.

20

20. The method of Claim 19, further comprising:
generating analog signals that represent the audible sounds in the first encoded
portion on a first link;
generating analog signals that represent the audible sounds in the second
encoded portion on a second link;
delaying the analog signals on the first link to bring them into phase with the
analog signals on the second link; and
generating audible sounds based on the analog signals on the first and second
links.

21. A system for sending high fidelity sound between wireless units, comprising:

a wireless module operable to facilitate establishing a first synchronous channel and a second synchronous channel and receive encoded portions of audible sounds over the first synchronous channel and encoded portions of the audible sounds over the second synchronous channel, the encoded audible sounds represented by the portions encoded at a rate greater than eight kilohertz; and

a processor operable to analyze the encoded portions to determine what audible sounds they represent and to determine a command based on the audible sounds represented.

22. The system of Claim 21, wherein the encoded portions from the first synchronous channel are one-hundred and eighty degrees out of phase with the encoded portions from the second synchronous channel.

23. The system of Claim 21, further comprising:

a coding module operable to decode the encoded portions into analog signals that represent the audible sounds; and

an audio interface operable to generate audible sounds based on the analog signals.

24. The system of Claim 23, wherein:

the audio interface is further operable to receive audible sounds and generate analog signals that represent the audible sounds;

the coding module is further operable to encode the analog signals; and

the wireless module is further operable to transmit the encoded audible signals.

25. The system of Claim 21, wherein the synchronous channels comprise synchronous connection-oriented links.

26. A method for sending high fidelity sound between wireless units, comprising:

establishing a first synchronous channel and a second synchronous channel;

5 receiving encoded portions of audible sounds over the first synchronous channel;

receiving encoded portions of the audible sounds over the second synchronous channel;

analyzing the encoded portions to determine the audible sounds represented by the portions; and

10 determining a command based on the audible sounds represented;

wherein the encoded audible sounds represented by the portions are encoded at a rate greater than eight kilohertz.

27. The method of Claim 26, further comprising:

15 decoding the encoded portions into analog signals; and
generating audible sounds based on the analog signals.

28. The method of Claim 26, further comprising:

20 receiving audible sounds;
generating analog signals based on the audible sounds;
encoding the analog signals; and
transmitting the encoded audible sounds.

29. The method of Claim 26, wherein the encoded portions from the first
25 synchronous channel and the second synchronous channel are out of phase.

30. The method of Claim 26, wherein the wireless channels comprise synchronous connection-oriented links.

31. A system for sending high fidelity sound between wireless units, comprising:

an audio interface operable to receive audible sounds and generate analog signals that represent the audible sounds, the audio interface comprising:

5 a first audio input device operable to receive audible sounds and generate analog signals that represent the audible sounds,

a second audio input device operable to receive audible sounds and generate analog signals that represent the audible sounds, and

10 a delay device operable to delay the analog signals from the second audio input device so that they are one-hundred and eighty degrees out of phase with the analog signals from the first audio input device;

a coding module operable to encode portions of the analog signals from the first audio input device and portions of the delayed analog signals from the second audio input device, the coding module comprising:

15 a first encoder operable to encode portions of the analog signals from the first audio input device according to G.711, and

a second encoder operable to encode portions of the delayed analog signals from the second audio input device according to G.711;

20 a wireless module operable to establish two synchronous connection-oriented links if high fidelity sound should be transmitted and transmit the encoded portions from the first encoder over the first synchronous connection-oriented link and the encoded portions from the second encoder over the second synchronous connection-oriented link; and

25 a processor operable to determine whether high fidelity sound should be transmitted and instruct the wireless module to establish links if high fidelity sound should be transmitted.